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OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER	
KAU, STEVEN Y	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/660,572	SASAKI, MAKOTO	
	Examiner	Art Unit	
	STEVEN KAU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 April 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 1, 2008 has been entered.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone communication with Mr. Stephen P. Catlin on February 11, 2009.

The application has been amended as follows:

- Claim 19 (Currently Amended) A storage medium for storing a program readable by a computer, the program making the computer execute a color process for adjusting colors of a specific region, which is a subject of color adjustment in a color image, wherein the program making the

computer execute a color processing comprising:

calculating a color adjustment distance, which is a distance on a color space between a representative color representing the specific region in the color image and a target color, which is target of the adjustment, on the basis of the representative color and the target color; and

deciding a reproduction color expressing the representative color of the specific region after the adjustment on the basis of the color adjustment distance, the reproduction color being located between the representative color and the target color, and the reproduction color having a reproduction distance, which is a distance between the representative color and the reproduction color, wherein the reproduction distance decreases with increase in the color adjustment distance when the color adjustment distance is larger than a certain value.

Response to Amendment

3. Applicant's amendment was received on 12/01/2008, and has been entered and made of record. Currently, claims 1-20 are pending for further examination in this Action.

Response to Remark/Arguments

4. Applicant's arguments with respect to claims 1-20 have been fully considered and the reply to the Remarks/Arguments is in the following:

- Applicant's arguments, section "Claim 20 is Not Duplicative", pages 8-9, Remarks, with respect to Claims 10 and 20 have been fully considered and, arguments recite, "In this case, claim 20 has a differing scope than claim 10 because it recites and thus requires the additional structure of a 'printer'", second paragraph, page 9, is found persuasive. Thus, claim objection to claim 20 is withdrawn from the record.
- Applicant's arguments with respect to Claims 1- 20 have been fully considered but are moot in view of the new ground(s) of rejection due to the amendments. The Examiner has thoroughly reviewed Applicant's arguments but firmly believes that the cited references are reasonably and properly meeting the claimed limitations.
- Should amendment be made, applicant is reminded to comply with 37 U.S.C. 1.173(c), which requires that "Whenever there is an amendment to the claim pursuant to paragraph (b) of this section, there must also be supplied, on pages separate from the pages containing the changes, the status (i.e. pending or canceled), as of the date of the amendment, of all patent claims and of all added claims, and an explanation of the support in the disclosure of the patent for the changes made to the claims"

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 19 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows:

Claim 19, an independent claim, is directed to a storage medium for storing a program readable by a computer. **"storage medium"** is defined in the original disclosure as a medium in a state of change of electric energy form. For example, recites, " **The term "storage medium" means a medium which can generate a state of change of magnetic, optical or electric energy for a reader provided as a hardware resource of the computer in accordance with the descriptive content of the program and which can transmit the descriptive content of the program to the reader in a signal format corresponding to the state of change of energy**", (emphasis added by the examiner), last paragraph of page 25 to first paragraph, page 26, specification. The examiner also notices that applicant lists some example of storage medium such “the opto-magnetic disk 111, the optical disk 112 (inclusive of a CD, a DVD, etc.), the magnetic disk 113, and the memory 114 (inclusive of an IC card, a memory card, etc.)”. However, applicant also points out in the last sentence, first paragraph, page 26, specification that, **"It is a matter of course that these storage media are not limited to portable media**”. That is, "storage medium" could just be a form of electronic signal carrying data to program a processor. For instance, a client computer machine can send a request signal to a server (another computer machine) or a printer requesting for printing a print job. A “signal” is not a process because it is not a series of steps per se. Furthermore, a “signal” is neither a “machine”, “composition of

matter" nor a "manufacture" because these statutory classes "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." (1 D. Chisum, Patents § 1.02 (1994)). Machines, manufactures and compositions of matter are embodied by physical structures or material, whereas a "signal" has neither a physical structure nor a tangible material. That is, a "signal" is not a "machine" because it has no physical structure, and does not perform any useful, concrete and tangible result. Likewise, a "signal" is not a "composition of matter" because it is not "matter", but rather a form of energy. Finally, a "signal" is not a "manufacture" because all traditional definitions of a "manufacture" have required some form of physical structure, which a claimed signal does not have.

Therefore, a "signal" is considered non-statutory because it is a form of energy, in the absence of any physical structure or tangible material, that does not fall within any of the four statutory classes of 35 U.S.C. §101.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 8-10 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (US 6,917,704) in view of Le (US 6,608,942).

Regarding claim 20.

Kojima discloses a printer comprising:

a color processing device (**i.e. a circuit of Fig. 2**) for adjusting colors of a specific region (**e.g. small region 501 of Fig. 3**), which is a subject of the adjustment in a color image (e**.g. a small region is processed in accordance with Fig. 1, First Embodiment, col 4, line 16-45**), wherein the color processing apparatus includes:

a color adjustment distance calculation section (**referring to the process of calculating color variance, or color distance of Fig. 1 and Variance Calculating Circuit 12 of Fig. 2, first embodiment, col 4, lines 38-55 and col 7, lines 33-50**) for calculating a color adjustment distance (**e.g. calculating the average of basic-color data, and then calculating the color variance or color distance of the respective basic-color corresponding to picture element, and determining target color, col 4, lines 38-55**), which is a distance on a color space between a representative color representing the specific region in the color image and a target color (**i.e. the color variance or color distance between the color variance or color distance of the respective basic-color corresponding to picture element and the maximum value of the variance, i.e. target color is calculated, Fig. 1, col 4, lines 46-55**), which is target of the adjustment, on the basis of the representative color and the target color (**i.e. based on the process of Fig. 1, average of basic-color data, and the color variance or color distance of the respective basic-color corresponding to picture**

element are calculated, and determining the target color, first embodiment, col 4, lines 16-65); and

a reproduction color decision section (**i.e. Circuit of Fig. 2**) for deciding a reproduction color expressing the representative color of the specific region after the adjustment on the basis of the color adjustment distance (**i.e. when the dividing is completed, only two color are generated for each region, col 6, lines 26-39**), wherein the reproduction color is located between the representative color and the target color **(i.e. since the reproduce color is based on the result of calculating the average of basic-color data, and then calculating the color variance or color distance of the respective basic-color corresponding to picture element, and determining target color, and then dividing the small region into section based on the target color, the reproduced color is in between the basic-color corresponding to picture element and the target color, Fig. 3, col 5 line 26 to col 6, line 38**), and the reproduction color having a reproduction distance, which is a distance between the representative color and the reproduction color (**i.e. as discussed above, the difference of reproduced color between the basic-color of picture element, and the difference of reproduced color between the target color is still existed, Fig. 3, col 5, line 26 to col 6, line 47**), wherein the reproduction distance decreases with increase in the color adjustment distance (**i.e. the reproduction distance, or the color variance between reproduction color and the basic-color of picture element is reduced based on the maximum target color as discussed above; that is, the**

reproduction distance decreased and color adjustment distance increased, Figs. 1 & 3, col 4, lines 38 to col 6, line 38).

Kojima does not disclose that the color adjustment distance is larger than a certain value.

In the same field of endeavor, Le teaches that the color adjustment distance is larger than a certain value **(i.e. determine if a between the intensity values of the target pixel and the relevant other surrounding pixel (i.e., right, top, left or bottom pixel for the East, North, West or South edge site, respectively) is greater than the predetermined intensity threshold, col 20, line 65 to col 21, line 4**).

Having a color processing device of Kojima' 704 reference and then given the well-established teaching of Le' 942 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the processing device of Kojima' 704 reference to include that the color adjustment distance is larger than a certain value as taught by Le' 942 reference since doing so would improve the accuracy of color adjustment of the color processing device and further the services provided could easily be established for one another with predictable results.

Regarding claim 1.

Claim 1 is directed to a color process method for adjusting colors of a specific region comprising calculating a color adjustment distance and deciding a reproduction color, in which a particular device, i.e. a computer or a printer, must be used in line with the method in order to carry out these method steps. Thus, this method claim meets the 35 U.S.C. 101 requirements.

Claim 1 is directed to a method claim which substantially corresponds to operation of the device in claim 20, with method steps directly corresponding to the function of device elements in claim 20. Thus, claim 1 is rejected as set forth above for claim 20.

Regarding claim 10.

Claim 10 is directed to a color processing apparatus claim which substantially corresponds to the operation of the device in claim 20, with identical features corresponding directly to the function of device elements in claim 20. Thus claim 10 is rejected as set forth above for claim 20.

Regarding claim 19.

Claim 19 is directed to a storage medium claim which substantially corresponds to operation of the device in claim 20, with processing steps directly corresponding to the function of device elements in claim 20. Thus, claim 19 is rejected as set forth above for claim 20.

Regarding claim 17, in accordance with claim 10.

Kojima discloses wherein the target color is a color having the same color component ratio as that of the representative color **("the variance of respective basic–color data corresponding to the picture elements is calculated, Step S103 of Fig. 1. At this time, the simple method of calculating the variance is to accumulate all absolute values of the difference between the average and the color data of respective picture elements. And the color having the maximum of variance is detected, and determined as a target color." A person of ordinary skill**

of the art understands target color is having the same color component ratio as that of the representative color; col 4, lines 38-55).

Regarding claim 18, in accordance with claim 10.

Kojima discloses a color adjustment unit (**e.g. Representative Color extracting Circuit of Fig. 2**) for adjusting the colors of the specific region toward the reproduction color (**i.e. calculating color variance and determine target color and dividing the region into sections in accordance with target color to produce the reproduction color, col 6, lines 51 through col 7, line 61**).

Regarding claim 8, in accordance with claim 1.

Claim 8 recites identical features as claim 17, except claim 8 is a method claim. Thus, arguments similar to that presented above for claim 17 are also equally applicable to claim 8.

Regarding claim 9, in accordance with claim 1.

The structure elements of method claim 1 perform all steps of claim 9. Thus claim 9 is rejected under 103(a) for the same reason discussed in the rejection of claim.

9. Claims 2, 3, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (US 6,917,704) in view of Le (US 6,608,942) as applied to claim 1 above, and further in view of Hiratsuka et al (Hiratsuka) (US 6,108,441).

Regarding claim 2, in accordance with claim 1.

Kojima discloses the calculation of the reproduction color, and the reproduction color is calculated on the basis of the color adjustment distance (**i.e. the reproduction**

color is obtained based on calculation of color variance of the basic-color and target color, when the dividing is completed, only two color are generated for each region, col 6, lines 26-39 and col 11, lines 33-40).

Kojima does not expressly teach calculating a reproduction distance coefficient, which is used to calculate the reproduction color, wherein: the reproduction distance coefficient.

Hiratsuka teaches calculating a reproduction distance coefficient, which is used to calculate the reproduction color, wherein: the reproduction distance coefficient (**i.e. in CIE L*a*b* color space, and m are coefficients for Euclidean distance calculation, and col 11, lines 11-22 & col 13, lines 10-30**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include calculating a reproduction distance coefficient, which is used to calculate the reproduction color, wherein: the reproduction distance coefficient taught by Hiratsuka because color adjustment involves many parameters, such as luminosity parameter, chroma parameter and hue parameter, and these color distance coefficient are used to improve color adjustment process in high speed and high accuracy (col 10, lines 62 through col 11, line 6).

Regarding claim 3.

Kojima discloses calculating a brightness adjustment coefficient, which is used to adjust brightness of the reproduction color, on the basis of the representative color, in the calculation of the reproduction color, the reproduction color is calculated on the

basis of the color adjustment distance and the brightness adjustment coefficient (**i.e. brightness signal L for color adjustment, col 13, lines 33-65**).

Kojima differs from claim 3, in that he does not expressly teach that the reproduction color is calculated on the basis of the reproduction distance coefficient.

Hiratsuka teaches that the reproduction color is calculated on the basis of the reproduction distance coefficient (**i.e. in CIE L*a*b* color space, and m are coefficients for Euclidean distance calculation, and col 11, lines 11-22 & col 13, lines 10-30**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include that the reproduction color is calculated on the basis of the reproduction distance coefficient taught by Hiratsuka because color adjustment involves many parameters, such as luminosity parameter, chroma parameter and hue parameter, and these color distance coefficient are used to improve color adjustment process in high speed and high accuracy (col 10, lines 62 through col 11, line 6).

Regarding claim 6.

Kojima discloses wherein the reproduction distance is constant when the color adjustment distance is not larger than the certain value but the reproduction distance is expressed by a differentiable and continuous function of the color adjustment distance (**i.e. the reproduction color is obtained based on the color variance calculation of basic-color and determination of target color, when the dividing is completed, that is, reproduction distance is constant, col 6, lines 26-39 and col 11, lines 33-**

40; and referring to Fig. 3, reproduction color is expressed in RGB components and continues function of color adjustment).

Kojima does not disclose distance coefficient and the color adjustment distance is larger than the certain value.

As discussed in claims 1 and 2 rejections above, Hiratsuka teaches distance coefficient for color distance calculation and Le teaches color distance greater than a threshold.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include distance coefficient for color distance calculation and the color adjustment distance is larger than the certain value as taught by Hiratsuka and Le, respectively. The motivation for doing so is because color adjustment involves many parameters, such as luminosity parameter, chroma parameter and hue parameter, and these color distance coefficient are used to improve color adjustment process in high speed and high accuracy (col 10, lines 62 through col 11, line 6) and would improve the accuracy of color adjustment of the color processing device and further the services provided could easily be established for one another with predictable results.

10. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Le (US 6,608,942) as applied to claims 1 and 10 above in view of Caruthers et al (Caruthers) (US 6,575,096).

Regarding claim 16.

Kojima discloses wherein the target color is one of a given color (**i.e. from a region of a picture element**), a color selected from a plurality of colors (col 4, lines 20-65).

Kojima does not expressly teach that the target color is a color having a predetermined color component ratio.

Caruthers teaches that the target color is a color having a predetermined color component ratio (**i.e. a method of predetermining mixing ratio corresponding to target color, col 14, lines 26-36 and line 64 through col 15, line 3**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include the target color is a color having a predetermined color component ratio taught by Carurthers to improve printed color and as an example, to produce significantly less glossy than paper used in the Pantone.RTM (col 14, lines 64 through col 15, line 3).

Regarding claim 7.

Claim 7 recites identical features as claim 16, except claim 7 is a method claim. Thus, arguments similar to that presented above for claim 16 are also equally applicable to claim 7.

11. Claims 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Le (US 6,608,942) and Hiratsuka et al (Hiratsuka) (US 6,108,441).

Regarding claim 11.

Kojima discloses a color processing apparatus (**i.e. apparatus in Fig. 10, col 2, lines 8-11**) for adjusting colors of a specific region (**i.e. region as shown in Figs. 3 and 14, col 4, lines 20-65**), which is a subject of the adjustment in a color image (**col 4, lines 20-65**), the color processing apparatus comprising: a color adjustment distance calculation section (**referring to the process of calculating color variance, or color distance of Fig. 1 and Variance Calculating Circuit 12 of Fig. 2, first embodiment, col 4, lines 38-55 and col 7, lines 33-50**) for calculating a color adjustment distance (**e.g. calculating the average of basic-color data, and then calculating the color variance or color distance of the respective basic-color corresponding to picture element, and determining target color, col 4, lines 38-55**), which is a distance on a color space (**RGB color space of Fig. 14**) between a representative color representing the specific region in the color image (**a small region of a picture element at coordinates (0, 0), col 4, lines 66 through col 5, line 5 & col 11, lines 33-64 and Figs 1 & 6**) and a target color (**i.e. the color variance or color distance between the color variance or color distance of the respective basic-color corresponding to picture element and the maximum value of the variance, i.e. target color is calculated, Fig. 1, col 4, lines 46-55**), which is target of the adjustment, on the basis of the representative color and the target color (**i.e. based on the process of Fig. 1, average of basic-color data, and the color variance or color distance of the respective basic-color corresponding to picture element are calculated, and determining the target color, first embodiment, col 4, lines 16-65**); a reproduction

distance calculation unit (**i.e. Circuit of Fig. 2**) for calculating a reproduction distance (**i.e. when the dividing is completed, only two color are generated for each region, col 6, lines 26-39**), which is used to calculate a reproduction color expressing the representative color of the specific region after color adjustment, on the basis of the color adjustment distance **i.e. since the reproduce color is based on the result of calculating the average of basic-color data, and then calculating the color variance or color distance of the respective basic-color corresponding to picture element, and determining target color, and then dividing the small region into section based on the target color, the reproduced color is in between the basic-color corresponding to picture element and the target color, Fig. 3, col 5 line 26 to col 6, line 38**), the reproduction distance being a distance between the representative color and the reproduction color (**i.e. as discussed above, the difference of reproduced color between the basic-color of picture element, and the difference of reproduced color between the target color is still existed, Fig. 3, col 5, line 26 to col 6, line 47**); and a reproduction color calculation unit for calculating the reproduction color on the basis of the color adjustment distance and the reproduction distance (**i.e. as discussed above, the difference of reproduced color between the basic-color of picture element, and the difference of reproduced color between the target color is still existed, Fig. 3, col 5, line 26 to col 6, line 47**), wherein the reproduction distance coefficient decreases with increase in the color adjustment distance when the color adjustment distance is larger than a certain value (**i.e. the reproduction distance, or the color variance between reproduction color and the**

basic-color of picture element is reduced based on the maximum target color as discussed above; that is, the reproduction distance decreased and color adjustment distance increased, Figs. 1 & 3, col 4, lines 38 to col 6, line 38).

Kojima differs from claim 11, in that he does not expressly teach a reproduction distance coefficient calculation unit for calculating a reproduction distance coefficient, which is used to calculate a reproduction color expressing the representative color of the specific region after color adjustment and the color adjustment distance is larger than a certain value

Hiratsuka teaches a reproduction distance coefficient calculation unit (**Figs. 1, 2 & 3**) for calculating a reproduction distance coefficient (**e.g. luminosity, chroma and hue parameters**), which is used to calculate a reproduction color expressing the representative color of the specific region after color adjustment (**col 11, lines 11-40 & col 13, lines 10-30**); and a reproduction color calculation unit for calculating the reproduction color on the basis of the reproduction distance coefficient (**Figs. 1-3, col 11, lines 11-40 & col 13, lines 10-30**); and

In the same field of endeavor, Le teaches that the color adjustment distance is larger than a certain value (**i.e. determine if a between the intensity values of the target pixel and the relevant other surrounding pixel (i.e., right, top, left or bottom pixel for the East, North, West or South edge site, respectively) is greater than the predetermined intensity threshold, col 20, line 65 to col 21, line 4**).

Having a color processing apparatus of Kojima's 704 reference and a well-established teaching of calculating a reproduction distance coefficient provided by

Hiratsuka' 441 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the color process apparatus of Kojima's 704 reference to include a reproduction distance coefficient calculation unit for calculating a reproduction distance coefficient, which is used to calculate a reproduction color expressing the representative color of the specific region after color adjustment as taught by Hiratsuka' 441 reference, since doing so would improve color adjust process at high speed and high accuracy (col 10, lines 62 to col 11, line 6, Hiratsuka), and further the calculating a reproduction distance coefficient provided could be implement able for one another with predictable results; and then have to modify the combination of Kojima's 704 and Hiratsuka' 441 to include that the color adjustment distance is larger than a certain value since doing so would improve the accuracy of color adjustment of the color processing device and further the services provided could easily be established for one another with predictable results.

Regarding claim 12, in accordance with claim 11.

The structure elements of apparatus claim 11 perform all steps of claim 12. Thus claim 12 is rejected under 103(a) for the same reason discussed in the rejection of claim 11.

Regarding claim 15, in accordance with claim 11.

The structure elements of apparatus claim 11 perform all steps of claim 15. Thus claim 15 is rejected under 103(a) for the same reason discussed in the rejection of claim 11.

12. Claims13 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Le (US 6,608,942) and Hiratsuka et al (Hiratsuka) (US 6,108,441) as applied to claims 3 and 12 above, and further in view of Kim et al (Kim) (US 2002/0090133).

Regarding claim 13.

Kojima discloses wherein the brightness adjustment coefficient calculation unit (i**.e. devices and process steps of Figs. 2-9**) calculates the brightness adjustment coefficient on the basis of at least one of brightness (**i.e. brightness signal and RGB data calculation in col 13, lines 33-65**).

Kojima differs from claim 13, in that he does not teach color saturation and hue of the representative color.

Kim teaches that color saturation and hue of the representative color (**i.e. saturation difference and hue difference determination in step 10 of Figs. 1 & 2, Para. 0032**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include color saturation and hue of the representative color taught by Kim to precisely measure in a color space and to overcome color adjustment problems such as used to separate an object included in an image from background of the image is that if two pixels of the same hue in an area of an object have different brightness and saturation components, they are treated as different color image (Paras 0005 and 0010).

Regarding claim 4.

Claim 4 recites identical features as claim 13, except claim 4 is a method claim. Thus, arguments similar to that presented above for claim 13 are also equally applicable to claim 4.

13. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (Kojima) (US 6,917,704) in view of Le (US 6,608,942) and Hiratsuka et al (Hiratsuka) (US 6,108,441) as applied to claims 3 and 12 above, and further in view of Matsugu (US 2002/0044691).

Regarding claim 14.

Kojima discloses a differentiable and continuous function of the color adjustment distance (**i.e. process steps of Figs. 1, 4 discloses the differentiable and continuous function of the color adjustment variation or distance, col 8, lines 54-60 & col 11, lines 26-50**).

Kojima does not expressly teach wherein the reproduction distance coefficient calculation unit calculates the reproduction distance coefficient in accordance with one of a monotone decreasing function of the color adjustment distance.

Matsugu teaches wherein the reproduction distance coefficient calculation unit calculates the reproduction distance coefficient in accordance with one of a monotone decreasing function of the color adjustment distance (**i.e. monotone function and conversion coefficient in color adjustment, Paras 0413 & 0423**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kojima to include the reproduction distance

coefficient calculation unit calculates the reproduction distance coefficient in accordance with one of a monotone decreasing function of the color adjustment distance taught by Matsugu to control coefficient parameters such as luminance, variation amount of gains and gamma characteristics, etc. Para 0412 & 0413).

Regarding claim 5.

Claim 5 recites identical features as claim 14, except claim 5 is a method claim. Thus, arguments similar to that presented above for claim 14 are also equally applicable to claim 5.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Steven Kau/
Examiner, Art Unit 2625
2/13/2009

/David K Moore/

Supervisory Patent Examiner, Art Unit 2625